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62. (Once Amended) An apparatus for varying the characteristics of an acoustic wave, comprising:

a medium for acoustic wave propagation;

a transducer formed on the medium for generating an acoustic wave;

a first light source illuminating a first portion of the medium during a propagation of the acoustic wave; and

a second light source illuminating a second portion of the medium during a propagation of the acoustic wave;

wherein a selected frequency component of the acoustic wave is read from the transducer.

Please add new claims 70-77, as follows:

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70. (New) A method according to claim 1, wherein:

Illuminating the medium comprises illuminating the medium with a light having a selected characteristic;

propagating the acoustic wave comprises propagating an acoustic wave having at least one of a velocity and wavelength dependent upon the selected characteristic of the light; and

reading a selected frequency component of the acoustic wave comprises providing the propagating acoustic wave to a transducer to provide an electronic signal dependent upon the selected frequency of the acoustic wave.

71. (New) A method according to claim 70, wherein the selected characteristic of the light comprises at least one of a selected wavelength and a selected intensity.

72. (New) A method according to claim 11, wherein:

varying a velocity of the acoustic wave comprises illuminating the medium with a light having a selected characteristic; and

reading a selected frequency component of the acoustic wave comprises providing the acoustic wave to a transducer to provide a signal dependent upon the velocity of the acoustic wave.

73. (New) A method according to claim 70, wherein the selected characteristic of the light comprises at least one of a selected wavelength and a selected intensity.

74. (New) An apparatus according to claim 17, wherein:

the light source comprises a source of light having a selected characteristic,

the medium comprises a substrate material for propagating the acoustic wave having at least one of a velocity and wavelength dependent upon the selected characteristic of the light; and

the transducer is coupled to receive an acoustic wave propagated by the medium and produce therefrom a signal dependent upon the selected frequency of the acoustic wave.

75. (New) A method according to claim 70, wherein the selected characteristic of the light comprises at least one of a selected wavelength and a selected intensity.

76. (New) A method according to claim 26, wherein:

providing a first light source comprises providing a light source for illuminating the medium with a light having a first selected characteristic;

providing a second light source comprises providing a light source for illuminating the medium with a light having a second selected characteristic;

providing a medium comprises providing a substrate material for propagating the acoustic wave having at least one of a velocity and wavelength dependent upon at least one of the first and second selected characteristics of light from the first and second light sources; and

the transducer is coupled to receive an acoustic wave propagated by the medium and produce therefrom a signal dependent upon the selected frequency component of the acoustic wave.

77. (New) A method according to claim 76, wherein the selected characteristics of light from each of the first and second light sources comprises at least one of a selected wavelength and a selected intensity.

REMARKS

Claim 62 is amended and claim 69 is cancelled herein without prejudice. In addition, claims 70-77 are added. Accordingly, claims 1-9, 11-15, 17-23, 25-32, 42-44 and 52-68 and 70-77 are pending in the application. . No new matter has been added.

In the Final Office Action dated April 1, 2002, claim 62 has been rejected under 35 U.S.C. §102. Claims 1-9, 11-15, 17-23, 25-32, 42-44 and 52-69 have been rejected under 35 U.S.C. §103. A Response to the Final Office Action under 37 C.F.R. 1.116 was filed on June 28, 2002. By an Advisory Action dated July 26, 2002, the Examiner indicated that the June 28, 2002, Response would not be entered.